

QE:218-1

Ms. Lida Tan
Remedial Project Manager
Federal Facilities, Superfund SFD-8-3
U.S. Environmental Protection Agency, Region 9
75 Hawthorne Street
San Francisco, CA 94105

Dear Ms. Tan:

Enclosed is an action memorandum for the sampling and removal of contaminated sediment from the storm water drainage trenches surrounding Hangar 1. While Hangar 1 is within the U.S. Navy's CERCLA site, NASA Ames Research Center is initiating the removal of this contamination in order to protect its storm water sewer system.

Please feel free to call me at 650-604-3355 if you have any questions.

Cordially,

Sandra M. Olliges
Chief, Environmental Services Office

Enclosure

cc: Andrea Espinoza, U.S. Navy, NAVFAC Southwest Division
Adriana Constantinescu, DoD Oversight Program, San Francisco Bay Regional
Water Quality Control Board
Max Weintraub, U.S. Environmental Protection Agency, Region 9, Toxics
Section
James McClure, McClure Consulting, MEW Site
Fred Banker, RMT, Inc., MEW Site
Bob Moss, RAB Community Co-Chair

MEMORANDUM

DATE: June 16, 2003

SUBJECT: Request for Time-Critical Removal Action at Hangar 1, Moffett Field, Santa Clara County, California

FROM: Ms. Sandra M. Olliges, Chief, Environmental Services Office, NASA Ames Research Center

TO: Ms. Lida Tan, Remedial Project Manager, U.S. Environmental Protection Agency, Region 9

I. PURPOSE

The purpose of this memorandum is to document the need for a time-critical removal action described herein at the storm water drainage trenches surrounding Hangar 1 at Moffett Field, California, 94035-1000. Although Hangar 1 and the surrounding storm water drainage trenches are within the U.S. Navy's CERCLA site at Moffett Field, the NASA Ames Research Center (NASA-Ames) is proposing to undertake this action in order to protect the storm water sewer system for which it is responsible.

II. SITE CONDITIONS AND BACKGROUND

Former Moffett Field Naval Air Station

Site Status: NPL-Final
Category of Removal: Time-Critical
CERCLIS ID: CA2170090078
Superfund Site ID: 0902734

A. Site Description

1. Physical location

The removal action site is located at the former Moffett Field Naval Air Station located at NASA Ames Research Center, Moffett Field, California. The removal action site is the area surrounding the exterior of Hangar 1 including the storm water drainage trenches and paved concrete surfaces immediately adjoining the building. The site is bounded by Cummins Avenue to the west, Sayre Avenue to east, Bushnell Street to the north and Cody Road and the south aircraft ramp to the south. The site is approximately 10 miles north of San Jose near the junction of Highways 101 and 85.

2. Site characteristics

Hangar 1 was constructed in 1933 when Moffett Field commissioned the U.S. military's lighter-than-air program. Hangar 1 is a steel-framed metal structure with metal-clad siding. As part of Moffett Field Naval Air Station, the Hangar was used by the U.S. military continuously following its construction. In 1994 the U.S. Navy transferred Moffett Field Naval Air Station, including Hangar 1, to the National Aeronautics and Space Administration (NASA).

3. Removal site evaluation

Earlier investigations by the U.S. Navy and NASA-Ames identified asbestos and lead in Hangar 1. Asbestos is present in building materials such as pipe insulation and Galbestos. Lead has been found in paint throughout the structure.

Recent investigations conducted by NASA found polychlorinated biphenyls (PCBs) in the materials from which Hangar 1 is constructed. Two bulk samples taken in July 2002, one of the roofing material and one of the Galbestos siding, contained high concentrations of Aroclor 1268, an uncommon form of PCB. Subsequent sampling in October and November 2002 and January 2003 has shown that PCBs as Aroclor 1260 and Aroclor 1268 are found in the Galbestos coating, roofing materials, window putty, and other interior and exterior building materials.

A rainwater sample taken from Manhole SD107, located in the parking lot south of building N-248 near the corner of Bushnell and Cummins Roads, had a detectable level of Aroclor 1268. Samples taken in March 2003 found detectable concentrations of Aroclor 1268 in rainwater and in sediment taken from the storm water drainage trench running along the eastern side of the Hangar.

Table 1 provides a summary of NASA-Ames' investigations of the exterior of the Hangar and the surrounding environment.

**Table 1.
Hangar 1 Exterior Sampling Results**

Date	Sample	Analyte(s)	Result(s)
Jul. 2002	Bulk samples from: Siding Roof	PCBs** Aroclor 1268	57,000 µg/Kg 39,000,000 µg/Kg
Oct. 2002	Storm water, Manhole SD 107	PCBs ** (Aroclor 1268)	3 µg/L
Oct. 2002	Storm water, Settling basin effluent	PCBs ** (Aroclor 1268)	0.6 µg/L
Oct. 2002	Sediment, Storm water settling basin (influent)	PCBs ** (Aroclor 1268)	2900 µg/mg
Oct. 2002	Environmental ambient air sampling; outside of Hangar; 4 screening stations.	PCBs Lead	Non-detect 0.013 µg/m ³ ***
Nov. 2002	Environmental ambient air sampling	PCBs	Non-detect
Jan. 2003	Hangar building materials: Multi-ply asphalt roof membrane; 6 samples taken, 5 layers per sample Roof sealant; 1 sample Upper (black) coated corrugated steel panel siding; 8 samples taken Lower(gray) coated corrugated composite panel siding; 10 samples taken Putty, 8 samples taken	PCBs ** Aroclor 1260 Aroclor 1268 Aroclor 1260 Aroclor 1268 Aroclor 1260 Aroclor 1268 Aroclor 1260 Aroclor 1268	0.5 ppm *** 0.9 ppm *** 4.4 ppm 5.7 ppm < 2 – 12 ppm < 5 – 119 ppm 20 – 35,000 ppm 15 – 5,500 ppm 1.7 – 77 ppm 4 – 409 ppm
Jan. 2003	Paint from various exterior Hangar surfaces	Lead	19 of 36 samples ≥ 1.0 mg/cm ²
Jan. 2003	Bulk paint chips; 2 samples taken	Lead	101,000 – 200,000 ppm
Jan. 2003	Various materials from exterior roofing and surfacing materials; 40 samples taken	Asbestos	18 samples with 0.7 – 18 % asbestos (as Chrysotile)
Mar. 2003	Rainwater from Hangar siding *	PCBs ** (Aroclor 1268)	3.09 µg/L and 6.7 µg/L
Mar. 2003	Rainwater from Hangar downspout *	PCBs ** (Aroclor 1268)	0.366 µg/L; and non-detect
Mar. 2003	East side Hangar storm water drainage trench sediment *	PCBs ** (Aroclor 1268)	65.5 ppm and 72.4 ppm

*Full suite of PCBs; only results above non-detect shown

** Split sample sent to 2 analytical labs.

*** Maximum concentration of analyte(s)

4. Release or threatened release into the environment of a hazardous substance, or pollutant or contaminant

Hangar 1 is constructed of a variety of materials, some of which contain PCBs as Aroclors 1260 and 1268), lead, and asbestos. The exterior surfaces are in fair condition and have degraded due to age and weathering, and some debris presumably from the exterior of the Hangar has been observed on concrete surfaces proximate to the Hangar. Sampling indicates that release of PCBs from the exterior of the Hangar has occurred (see Table 1), and most likely, continues to occur.

5. NPL Status

Hangar 1 is located at the former Moffett Field Naval Air Station. Moffett Field Naval Air Station is on the NPL list, CERCLIS ID number CA2170090078.

B. Other Actions to Date

NASA-Ames has provided its findings to the U.S. Navy's Naval Facilities Engineering Command Southwest Division, which oversees the CERCLA activities at the former Moffett Field Naval Air Station.

On December 19, 2002 and April 17, 2003 NASA-Ames and EPA Region 9 representatives met by telephone to discuss the discovery of PCBs at Hangar 1 and in the nearby environment. NASA-Ames has had several follow-up meetings to date with EPA Region 9 personnel to review options for managing PCBs at the Hangar and to pursue a time-critical removal action of the PCBs in the storm water drainage trenches and on exterior paved surfaces adjacent to the structure.

C. State and Local Authorities' Roles

1. State and local actions to date

NASA-Ames contacted Mr. Greg Bartow of the San Francisco Bay Area Regional Water Quality Control Board (RWQCB) in December 2002 to notify him that the source of the Aroclor 1268 reported in the annual storm water reports for rain-years 1999-2000, 2000-2001, and 2001-2002 had been identified as Hangar 1 due to the presence of materials containing that substance in the Hangar's building materials. Mr. Bartow subsequently informed other RWQCB personnel. RWQCB staff have indicated to NASA-Ames that they expect that EPA will be the lead regulatory agency regarding actions taken at Hangar 1.

In December 2002 and January and February 2003, NASA-Ames contacted Mr. Mardis Coers and Mr. Stan Phillipe of the California Department of Toxic Substances Control

(DTSC) to discuss findings to date. DTSC deferred to the RWQCB and EPA concerning any mitigation actions at Hangar 1.

III. THREATS TO PUBLIC HEALTH OR WELFARE AND THE ENVIRONMENT, AND STATUTORY AND REGULATORY AUTHORITIES

Conditions at the site present a release and a potential threat of a release, of a CERCLA hazardous substance threatening public health, or welfare or the environment based on the factors set forth in the National Oil and Hazardous Substances Pollution Contingency Plan (NCP), 40 CFR § 300.415(b)(2).

Hangar 1 is constructed of a variety of materials, some of which contain high levels of PCBs as Aroclor 1260 and Aroclor 1268, lead and asbestos. The exterior surfaces are in fair condition and have degraded due to age and weathering, and some debris presumably from the exterior of the Hangar has been observed on concrete surfaces proximate to the Hangar.

1. Actual or potential exposure to hazardous substances or pollutants or contaminants of nearby populations or the food chain

PCBs have been detected in earlier storm water and sediment samples taken by NASA-Ames.

Storm water samples taken in October 2002 exceed EPA's Water Quality Criteria for PCBs in fresh and salt water of 0.014 micrograms per liter ($\mu\text{g/L}$) and 0.03 $\mu\text{g/L}$ respectively.

Sediment sampled from one of the storm water drainage trenches in March 2003 exceeds EPA's TSCA limit of 50 parts per million (ppm) as well as EPA's Moffett Field site-specific ecological and DTSC's NASA Ames' residential cleanup levels of 0.470 ppm and 1 ppm, respectively.

2. Actual or potential contamination of drinking water supplies

There is no known or potential contamination of drinking water supplies arising from any release or threatened release of PCBs, lead or asbestos from Hangar 1.

3. Hazardous substances or pollutants or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release.

There are no drums, barrels, tanks, or other bulk storage containers containing PCBs, lead or asbestos in Hangar 1 that pose a threat of a release of any hazardous substance or pollutant or contaminant. The hazard posed by Hangar 1 is the materials from which the

Hangar is constructed, which contain PCBs, lead and asbestos.

4. High levels of hazardous substances or pollutants or contaminants in soils at or near the surface, that may migrate.

It is unknown whether soil at or near the surface in the areas surrounding Hangar 1 contains high levels of hazardous substances or pollutants or contaminants.

5. Weather conditions that may cause hazardous substances or pollutants or contaminants to migrate or be released

The exterior surfaces of Hangar 1 are in fair condition and have degraded due to age and weathering. It is anticipated that PCBs, lead and/or asbestos could be released from the exterior building material during moderate to severe winter storms.

6. Threat of fire or explosion

There is a low threat of fire or explosion of Hangar 1. There are combustible building materials inside the Hangar, such as wooden walls enclosing rooms in the Hangar's interior, but there is very little storage or use of flammable, reactive or explosive substances.

7. Availability of other appropriate Federal or State response mechanisms to respond to the release

Hangar 1 is located at the former Moffett Field Naval Air Station. Moffett Field Naval Air Station is on the NPL list. NASA-Ames is proposing this time-critical removal action in order to protect the storm water system for which it is responsible. NASA may seek the Navy's assistance in this time-critical removal action.

IV. ENDANGERMENT DETERMINATION

Sampling conducted by NASA-Ames to date indicates an immediate and severe threat to the storm water system from the contaminants that may be in the Hangar 1 storm water drainage trenches and from contaminants that may be found on the paved surfaces immediately proximate to the Hangar. Migration of contaminants from these areas may present an imminent threat to public health, welfare or the environment.

V. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed Actions

1. Proposed Action Description

NASA-Ames proposes to sample the sediment in the storm water drainage trenches surrounding Hangar 1 every 100 feet. A total of approximately 35 samples will be taken of the sediment. The samples of the sediment in the storm water drainage trenches will be analyzed for PCBs, including Aroclors 1268 and 1260, lead and asbestos.

Any sediment with PCB contamination that meets or exceeds 1 part per million (ppm), will be removed and disposed offsite to a facility approved to accept this material. Any sediment that meets the hazardous waste toxicity characteristic for PCB, lead and/or asbestos will be disposed to a hazardous waste Treatment, Storage and Disposal Facility authorized to accept these materials.

2. Contribution to remedial performance

The time-critical removal action would remove contaminants from the Hangar 1 storm water drainage trenches and on the paved surfaces immediately proximate to the Hangar. It is not anticipated that long-term remedial action would be required for these areas. Removal of contaminants from these areas will abate the immediate threats to the storm water system, reducing threats to public health, welfare and the environment.

3. Description of alternative technologies

Alternative technologies are not considered for the proposed time-critical removal action.

4. Applicable or relevant and appropriate requirements (ARARs)

Section 300.415(j) of the NCP provides that removal actions must attain ARARs to the extent practicable, considering the exigencies of the situation.

Section 300.5 of the NCP defines *applicable requirements* as cleanup standards, standards of control, and other substantive environmental protection requirements, criteria or limitations promulgated under Federal environmental or State environmental or facility siting laws that specifically address a hazardous substance, pollutant, contaminant, remedial action, location or other circumstances at a CERCLA site.

Section 300.5 of the NCP defines *relevant and appropriate requirements* as cleanup standards, standards of control and other substantive requirements, criteria, or limitations promulgated under Federal environmental or State environmental or facility siting laws that, while not “applicable” to a hazardous substance, pollutant, or contaminant, remedial action, location, or other circumstances at a CERCLA site, address problems or situations sufficiently similar to those encountered at the CERCLA site and are well-suited to the particular site.

Because CERCLA on-site response actions do not require permitting, only substantive requirements are considered as possible ARARs. Administrative requirements such as approval of, or consultation with administrative bodies, issuance of permits,

documentation, reporting, record keeping, and enforcement are not ARARs for the CERCLA actions confined to the site.

The following ARARs have been identified for the proposed response action. All can be attained.

Federal ARARs

Potential Federal ARARs are:

- Hazardous Waste from Non-Specific Sources, 40 CFR 261.31 and Toxicity Characteristics, 40 CFR 261.24;
- Land Disposal Restrictions, 40 CFR 268.40 Subpart D;
- Polychlorinated Biphenyls Management, 40 CFR 761;
- CERCLA Off-Site Disposal Rule OSWER Directive 9347.3-8FS;
- EPA's Moffett Field site-specific ecological and residential cleanup levels and
- U.S. Department of Transportation of Hazardous Materials Regulations 49 CFR Part 171, 172 and 173.

State ARARs:

Potential California ARARs are:

- California toxicity characteristics for hazardous waste in California Code of Regulations Title 22 sections 66261.24 and 66261.113).
- DTSC's NASA Ames site specific residential cleanup level for PCBs in soil.

5. Project schedule

The removal action is scheduled to begin within one week of approval of the action as indicated by the signature on this memorandum, beginning with sampling. It is estimated that the removal action, including removal of contaminants from the Hangar 1 storm water drainage trenches and on the paved surfaces immediately proximate to the Hangar and disposal of any hazardous waste, will not exceed 6 months.

B. Estimated Costs

NASA-Ames estimated costs are:

- Sampling and analysis \$2800
(approximately 35 samples, estimated \$80 per sample for PCB, lead, asbestos analyses)
- Sediment removal and disposal \$26,000
(assuming 3300 ft³ PCB/lead contaminated sediment/debris)

Total estimated costs \$28,800

VI. EXPECTED CHANGE SHOULD ACTION BE DELAYED OR NOT TAKEN

NASA-Ames is required to manage storm water discharges through its storm water drainage system. If NASA-Ames cannot remove contaminated sediment from the storm water drainage trenches surrounding Hangar 1, the sediment will continue to be a source of Aroclor 1268.

VII. OUTSTANDING POLICY ISSUES

No outstanding policy issues are expected to exist for this removal action.

VIII. ENFORCEMENT

No enforcement action exists for this time-critical removal action.

IX. RECOMMENDATION

This action memorandum was prepared in accordance with current US EPA guidance documents for Time-Critical Removal Actions. This document represents the recommended removal action for the removal of environmental contamination at the exterior of Hangar 1, Moffett Field, California, including the storm water drainage trenches and paved concrete surfaces immediately adjoining the building, developed in accordance with CERCLA as amended, and not inconsistent with the NCP. The removal action described herein will contribute to the overall goals of the Former Moffett Field Naval Air Station CERCLA actions, and in addition will protect the NASA storm water system.

Approve:

Lida Tan, Remedial Project Manager Date

Disapprove:

Lida Tan, Remedial Project Manager Date

REVISED ACTION MEMORANDUM FOR THE
SAMPLING AND REMOVAL OF CONTAMINATED
SEDIMENT FROM THE STORM WATER DRAINAGE
TRENCHES SURROUNDING HANGAR 1

DATED 17 JULY 2003

IS FILED AS ADMINISTRATIVE RECORD NO.
N00296.000680